Express Mail Label No.: EV 516216547 US

Docket No.:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (Currently Amended) Nanometric positioning device containing a foundation element with attached crude positioning stage capable of backward and forward travel with regard to it, wherein:
- [[. On]] on top of the crude stage is attached a fine positioning stage with an executing element and capable of backward and forward travel with regard to the crude stage;
- [[. C]] the crude positioning stage is kinematically coupled to the foundation element as well as coupled to the fine positioning stage, allowing both crude and fine stages to move independently with respect to the foundation element;
- [[. T]] the kinematic coupling of the crude and fine positioning stages allows for autonomous movement of the executing element with regard to both crude stage and, correspondingly, to the foundation element;
- [[. T]] the mounting of the crude and fine stages is such that it allows their respective movement along both coordinate axes of the plane;
- [[. T]] the crude stage is executed in the form of a rigid bearing plate carrying a rigidly fixed frame inside which the fine stage's executing element is situated;
- [[. T]] the latter can move and be fixated in a given position by mean of pairs of nanometer range positioning elements on each one of the four sides of the frame; and
- [[. T]] the margin of error in the positioning of the crude stage is smaller than the range of fine stage positioning along either of the two coordinate axes.
- 2. (Currently Amended) Nanometric positioning device according to [[#]] <u>claim 1 above</u> <u>but differing in that wherein positioning elements are realized in the form of magnetostrictive transducers.</u>
- 3. (Currently Amended) Nanometric positioning device according to #1 or #2 above but differing in that claim 1, wherein kinematic coupling of the crude positioning stage with the foundation element is realized in the form of at least two precision linear motors, providing for displacing the rigid plate of the crude positioning stage along both corresponding coordinate axes.

Express Mail Label No.: EV 516216547 US

Docket No.:

4. (Currently Amended) Nanometric positioning device according to #3 above but differing in that it claim 3, wherein the device is equipped with the means of moving the rigid plate of the crude positioning stage along both corresponding coordinate axes on an air cushion.

- 5. (Currently Amended) Nanometric positioning device according to any of the ##1-4 above but differing in that claim 1 wherein the foundation element is equipped with means of fixating the crude positioning stage using the principle of vacuum suction.
- 6. (Currently Amended) Nanometric positioning device according to any of the ##1-5 above but differing in that it claim 1, wherein the device is equipped with a system of measurement and control of the positioned object, which includes at least three measurement and control devices with accuracy no worse than the accuracy of positioning assured by the positioning elements; one of the said measuring and control devices is situated so it allows for linear control and measurement of the object's position along one of the coordinate axes, while the others in a way that allows for linear-polar control and measurement of the object's position with regard to the other one of the orthogonal coordinate axes in the foundation element's plane.
- 7. (Currently Amended) Nanometric positioning device according to #6 above but differing in that it-claim 6, wherein the device is equipped with a system of controlling positioning elements, which allow for the displacement of the positioned object over a specified distance by executing element of the fine positioning stage, which is coupled to the system of measurement and control of the positioned object location.
- 8. (Currently Amended) Nanometric positioning device according to #6 or #7 above but differing in that claim 6, wherein the means of measurement and control of the measurement and control system for the location of positioned object are realized in the form of laser heterodyne interferometers and/or capacitance sensors of the deviation of the crude and fine positioning stages' position relative to the foundation element plane.
- 9. (New): Nanometric positioning device according to claim 2, wherein kinematic coupling of the crude positioning stage with the foundation element is realized in the form of

Express Mail Label No.: EV 516216547 US Docket No.:

at least two precision linear motors, providing for displacing the rigid plate of the crude positioning stage along both corresponding coordinate axes.

- 10. (New) Nanometric positioning device according to claim 9, wherein the device is equipped with the means of moving the rigid plate of the crude positioning stage along both corresponding coordinate axes on an air cushion.
- 11. (New) Nanometric positioning device according to claim 10 wherein the foundation element is equipped with means of fixating the crude positioning stage using the principle of vacuum suction.
- 12. (New) Nanometric positioning device according to claim 11, wherein the device is equipped with a system of measurement and control of the positioned object, which includes at least three measurement and control devices with accuracy no worse than the accuracy of positioning assured by the positioning elements; one of the said measuring and control devices is situated so it allows for linear control and measurement of the object's position along one of the coordinate axes, while the others in a way that allows for linear-polar control and measurement of the object's position with regard to the other one of the orthogonal coordinate axes in the foundation element's plane.
- 13. (New) Nanometric positioning device according to claim 12, wherein the device is equipped with a system of controlling positioning elements, which allow for the displacement of the positioned object over a specified distance by executing element of the fine positioning stage, which is coupled to the system of measurement and control of the positioned object location.
- 14. (New): Nanometric positioning device according to claim 13, wherein the means of measurement and control of the measurement and control system for the location of positioned object are realized in the form of laser heterodyne interferometers and/or capacitance sensors of the deviation of the crude and fine positioning stages' position relative to the foundation element plane.